UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,064	12/16/2003	Raymond Hornback JR.	LOT920030076US1 (030)	5214

46321   7590   09/21/2009
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ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
09/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/737,064	HORNBACK ET AL.
Office Action Summary	Examiner	Art Unit
	SATH V. PERUNGAVOOR	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 June 2009_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-8 and 10-14_ is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-8 and 10-14_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

[1]   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37

CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for

continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely

paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on June 29, 2009 has been entered.

Response to Arguments/Amendments

[2]   Presented arguments have been fully considered, but are rendered moot in view of the new

ground(s) of rejection necessitated by amendment(s) initiated by the applicant(s).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

[3]   Claims 1, 2, 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over De

Queiroz [US 2001/0041017 A1] in view of Deshpande [US 2003/0093568 A1].

Regarding claim 1, De Queiroz discloses the following claim limitations:

A componentized application sharing system *[figs. 1 and 2]* configured for use with a shared application host *(i.e. 10)*, the system comprising: a plurality of different pluggable image processing modules *(i.e. M1-M4)*, each of said different pluggable image processing modules *(i.e. M1-M4)* conforming to a corresponding single interface *(i.e. 118)* expected by an application sharing module *(i.e. communication control unit and 24)* *[fig. 2; para. 0043]*, each of said different pluggable image processing modules being selectable to meet requirements of a shared application *(i.e. image to be transmitted)* comprising rendered image frames *(i.e. image data generated using the scanner)* of the shared application *(i.e. image to be transmitted)* hosted in the shared application host *(i.e. 10)* and shared between different application sharing viewers *(i.e. 26)* *[paras. 0038 and 0043]*; and, a communicative coupling *(i.e. system bus)* between the application sharing module *(i.e. communication control unit and 24)* and a selected one of said different image processing modules *(i.e. 22)* *[fig. 1 and 2]*.

De Queiroz does not explicitly disclose the following claim limitations (emphasis added):

comprising <u>displayed</u> rendered image frames of the shared application hosted in the shared application host and shared between different application sharing viewers;

However, in the same field of endeavor Deshpande discloses the deficient claim limitations, as follows:

Comprising <u>displayed</u> rendered image frames of the shared application hosted in the shared application host *(i.e. images displayed on the server 30)* and shared between different application sharing viewers *(i.e. thin client 10)* *[para. 0036]*.

De Queiroz and Deshpande are combinable because they are from the same field of image transmission.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of De Queiroz with Deshpande and apply the method of De Queiroz to displayed image transmissions of Deshpande, the motivation being to provide fast transmission without significantly sacrificing quality *[De Queiroz: para. 0001]*.

Regarding claim 2, De Queiroz meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image compression modules *(i.e. M1-M4) [fig. 2; para. 0042]*.

Regarding claim 7, De Queiroz meets the claim limitations, as follows:

The system of claim 2, wherein said different image compression modules *(i.e. M1-M4)* comprise image compression logic *(i.e. 104)* programmed to produce one of a smallest possible image size to provide a highest possible rate of transmission for a compressed image *(i.e. M4)*, a lowest level of image resolution loss to provide a highest level of image fidelity for a compressed image *(i.e. M1)*, and a moderate image size *(i.e. M2 or M3)* to provide an intermediate rate of transmission and an intermediate level of image fidelity for a compressed image *[paras. 0042 and 0043]*.

Regarding claims 8 and 10, all claimed limitations are set forth and rejected as per discussion for claims 1, 2 and 7.

[4]   Claims 1-4, 8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Roylance [US 2003/0007703 A1] in view of Deshpande [US 2003/0093568 A1].

Regarding claim 1, Roylance discloses the following claim limitations:

> A componentized application sharing system *(i.e. 100)* configured for use with a
>
> shared application host *(i.e. 118)*, the system comprising: a plurality of different
>
> pluggable image processing modules *(i.e. 306)*, each of said different pluggable image
>
> processing modules *(i.e. 306)* conforming to a corresponding single interface *(i.e. 300)*
>
> expected by an application sharing module *(i.e. 204)* *[figs. 1-3; paras. 0020-0024]*, each
>
> of said different pluggable image processing modules *(i.e. 306)* being selectable to
>
> meet requirements of a shared application *(i.e. image to be transmitted)* comprising
>
> rendered image frames *(i.e. image data generated using the scanner)* of the shared
>
> application *(i.e. image to be transmitted)* hosted in the shared application host *(i.e. 118)*
>
> and shared between different application sharing viewers *(i.e. 108, 106, 102)* *[paras.*
>
> *0018, 0021 and 0035]*; and, a communicative coupling *(i.e. 300)* between the
>
> application sharing module *(i.e. 204)* and a selected one of said different image
>
> processing modules *(i.e. 306)* *[fig. 3; para. 0022]*.

Roylance does not explicitly disclose the following claim limitations (emphasis added):

> comprising <u>displayed</u> rendered image frames of the shared application hosted in the
>
> shared application host and shared between different application sharing viewers;

However, in the same field of endeavor Deshpande discloses the deficient claim limitations,

as follows:

Comprising <u>displayed</u> rendered image frames of the shared application hosted in the

shared application host *(i.e. images displayed on the server 30)* and shared between

different application sharing viewers *(i.e. thin client 10) [para. 0036]*.

Roylance and Deshpande are combinable because they are from the same field of image

transmission.

It would have been obvious to one with ordinary skill in the art at the time of invention to

modify the teachings of Roylance with Deshpande and apply the method of Roylance to

displayed image transmissions of Deshpande, the motivation to implement a device that is

readily adaptable/modifiable *[para. 0007]*.

Regarding claim 2, Roylance meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a

plurality of different pluggable image compression modules *[para. 0029]*.

Regarding claim 3, Roylance meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a

plurality of different pluggable image capturing modules *[para. 0029: integrating]*.

Regarding claim 4, Roylance meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a

plurality of different pluggable image transmission modules *[para. 0029: coder]*.

Regarding claim 8, Roylance meets the claim limitations, as set forth in the discussion for

claim 1 and further discloses the application sharing host comprising selection logic

programmed to select an application sharing strategy ranging from high image fidelity to

high speed image transmission *[para. 0029: Any selecting method would fall within this range]*.

Regarding claims 10-12, all claimed limitations are set forth and rejected as per discussion for

claims 1-4.

[5]   Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Queiroz

in view of Deshpande further in view of Shen et al. ("Shen") [US 6,055,017].

Regarding claim 6, De Queiroz and Deshpande meet the claim limitations as disclosed in

claim 1.

De Queiroz and Deshpande do not explicitly disclose the following claim limitations:

> The system of claim 1, wherein said pluggable image processing modules comprises a
>
> plurality of different pluggable image region selection modules configured to process
>
> selected image sub-partitions of shared application imagery, each of said different
>
> pluggable image region selection modules selecting and ordering processing of said
>
> selected image sub-partitions differently.

However, in the same field of endeavor Shen discloses the deficient claim limitations, as

follows:

> A plurality of different pluggable image region selection *(i.e. 6, 7 and 8)* modules
>
> configured to process selected image sub-partitions *(i.e. sub-bands)* of shared
>
> application imagery, each of said different pluggable image region selection modules

(i.e. 6, 7 and 8) selecting and ordering processing *(i.e. scan path)* of said selected image
sub-partitions differently *(i.e. horizontal, vertical or zig-zag) [figs. 5 and 7].*

It would have been obvious to one with ordinary skill in the art at the time of invention to
modify the teachings of De Queiroz and Deshpande with Shen to use different scanning
directions based on sub-bands, the motivation being to use less bits *[col. 2, ll. 29-40].*

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for
claim 6.

[6]   Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Roylance</u> in
view of <u>Deshpande</u> further in view of <u>Shen</u> et al. ("Shen") [US 6,055,017]..

Regarding claim 6, Roylance and Deshpande meet the claim limitations as disclosed in claim
1.

Roylance and Deshpande do not explicitly disclose the following claim limitations:

> The system of claim 1, wherein said pluggable image processing modules comprises a
> plurality of different pluggable image region selection modules configured to process
> selected image sub-partitions of shared application imagery, each of said different
> pluggable image region selection modules selecting and ordering processing of said
> selected image sub-partitions differently.

However, in the same field of endeavor Shen discloses the deficient claim limitations, as
follows:

> A plurality of different pluggable image region selection *(i.e. 6, 7 and 8)* modules configured to process selected image sub-partitions *(i.e. sub-bands)* of shared application imagery, each of said different pluggable image region selection modules *(i.e. 6, 7 and 8)* selecting and ordering processing *(i.e. scan path)* of said selected image sub-partitions differently *(i.e. horizontal, vertical or zig-zag) [figs. 5 and 7]*.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Roylance and Deshpande with Shen to use different scanning directions based on sub-bands, the motivation being to use less bits *[col. 2, ll. 29-40]*.

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for claim 6.

[7]   Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Roylance</u> in view of <u>Deshpande</u> further in view of <u>Jang</u> et al. ("Jang") [NPL document titled, "Performance Evaluation of Scene Change Detection Algorithms"].

Regarding claim 5, Roylance and Deshpande meet the claim limitations as disclosed in claim 1.

Roylance and Deshpande do not explicitly disclose the following claim limitations:

> The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image change detection modules configured to trigger image updates responsive to changes in portions of a shared application image.

However, in the same field of endeavor Jang discloses the deficient claim limitations, as

follows:

> A plurality of different pluggable image change detection *(i.e. scene change)* modules *(i.e.*
>
> *1.1, 1.2 and 1.3)* configured to trigger image updates responsive to changes in
>
> portions of a shared application image *[page 841, col. 1, paras. 2 and 3; Sections 1.1, 1.2*
>
> *and 1.3]*.

It would have been obvious to one with ordinary skill in the art at the time of invention to

modify the teachings of Roylance and Deshpande with Jang to select among the different

scene change algorithms, the motivation being that each algorithm as a trade off between

speed and accuracy *[page 842, col. 1, paras. 1 and 2; page 842, col. 2, para. 2]*.

Regarding claim 13, all claimed limitations are set forth and rejected as per discussion for

claim 5.

[8]   Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>De Queiroz</u>

in view of <u>Deshpande</u> further in view of <u>Jang</u> et al. ("Jang") [NPL document titled, "Performance

Evaluation of Scene Change Detection Algorithms"].

Regarding claim 5, De Queiroz and Deshpande meet the claim limitations as disclosed in

claim 1.

De Queiroz and Deshpande do not explicitly disclose the following claim limitations:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image change detection modules configured to trigger image updates responsive to changes in portions of a shared application image.

However, in the same field of endeavor Jang discloses the deficient claim limitations, as follows:

A plurality of different pluggable image change detection *(i.e. scene change)* modules *(i.e. 1.1, 1.2 and 1.3)* configured to trigger image updates responsive to changes in portions of a shared application image *[page 841, col. 1, paras. 2 and 3; Sections 1.1, 1.2 and 1.3]*.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of De Queiroz and Deshpande with Jang to select among the different scene change algorithms, the motivation being that each algorithm as a trade off between speed and accuracy *[page 842, col. 1, paras. 1 and 2; page 842, col. 2, para. 2]*.

Regarding claim 13, all claimed limitations are set forth and rejected as per discussion for claim 5.

Allowable Subject Matter

[9]   The following claim 1 is drafted by the examiner and considered to distinguish patentably over the art of record in this application.

1.   A componentized application sharing system ~~configured for use with a shared application host~~, the system comprising:

a shared application host computer sharing images with at least a plurality of shared

application viewer computers;

a plurality of different pluggable image processing modules implemented on said shared

application host computer, each of said different pluggable image processing modules conforming

to a corresponding single interface expected by an application sharing module implemented on said

shared application host computer, each of said different pluggable image processing modules being

selectable to meet requirements of a shared application, said pluggable image processing modules

comprising:

a plurality of different pluggable image region selection modules configured to

process selected image sub-partitions of shared application imagery, each

of said different pluggable image region selection modules selecting and ordering

processing of said selected image sub-partitions differently;

a plurality of different image compression modules comprising image compression

logic programmed to produce one of a smallest possible image size to provide a highest

possible rate of transmission for a compressed image, a lowest level of image resolution loss

to provide a highest level of image fidelity for a compressed image, and a moderate image

size to provide an intermediate rate of transmission and an intermediate level of image

fidelity for a compressed image; and comprising displayed rendered image frames of the

shared application hosted in the shared application host and shared between different

application sharing viewers; and,

a communicative coupling between the shared application host computer and the shared

application viewer computers, for transmitting images. application sharing module and a selected

one of said different image processing modules.

Contact Information

[10]   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Mr. Sath V. Perungavoor whose telephone number is **(**571**)** 272-7455. The

examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Mr. Bhavesh M. Mehta whose telephone number is (571) 272-7453, can be reached on Monday to

Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application

or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system,

see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: September 19, 2009   /Sath V. Perungavoor/
                                                   _____
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